Title (en)

METHOD FOR PRODUCING MICROCHANNEL AND MICROCHANNEL

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES MIKROKANALS UND MIKROKANAL

Title (fr)

PROCÉDÉ PERMETTANT DE PRODUIRE UN MICROCANAL, ET MICROCANAL

Publication

EP 2939976 A4 20161012 (EN)

Application

EP 13867007 A 20131218

Priority

- JP 2012288628 A 20121228
- JP 2013083951 W 20131218

Abstract (en)

[origin: EP2939976A1] Provided is a method for producing a microchannel including an approximately circular cross section with neither a joined surface nor an inlet in a smaller number of steps than has been conventional. The method for producing a microchannel includes the steps of forming a layer of an uncured curable resin on a substrate, inserting into the curable resin a needle body that can inject a liquid, injecting a liquid in a tubular shape into the curable resin via the needle body while moving the needle body, extracting the needle body from the curable resin, and curing the curable resin to form a channel in a tubular region injected with the liquid.

IPC 8 full level

B81C 1/00 (2006.01); **B01J 19/00** (2006.01); **B81B 1/00** (2006.01); **C12M 1/00** (2006.01); **G01N 37/00** (2006.01)

CPC (source: EP US)

B01J 19/0093 (2013.01 - EP US); **B01L 3/502707** (2013.01 - EP US); **B29C 67/0048** (2013.01 - US); **B81B 1/00** (2013.01 - US); **B81C 1/00** (2013.01 - US); **B81C 1/00071** (2013.01 - EP US); **C12M 23/16** (2013.01 - EP US); **G01N 37/00** (2013.01 - US); B01J 2219/00783 (2013.01 - EP US); B01J 2219/00833 (2013.01 - EP US); B01J 2219/0086 (2013.01 - EP US); B01L 2300/12 (2013.01 - EP US); B29C 2035/0827 (2013.01 - EP US); B81B 2203/0338 (2013.01 - EP US); Y10T 428/24744 (2015.01 - EP US)

Citation (search report)

- [AD] ANONYMOUS: "Fabrication of semi-round microchannels using a fluid dispenser and its application to a flow regulator", 31 December 2011 (2011-12-31), XP002761080, Retrieved from the Internet <URL:http://www.microfluidics.iis.u-tokyo.ac.jp/r11016.html> [retrieved on 20160824]
- [AD] RUI LIMA ET AL: "Axisymmetric polydimethysiloxane microchannels for in vitro hemodynamic studies", BIOFABRICATION, vol. 1, no. 3, 035005, 1 September 2009 (2009-09-01), UK, pages 1 - 7, XP055297460, ISSN: 1758-5082, DOI: 10.1088/1758-5082/1/3/035005
- [AD] JEFFREY T BORENSTEIN ET AL: "Functional endothelialized microvascular networks with circular cross-sections in a tissue culture substrate", BIOMEDICAL MICRODEVICES, KLUWER ACADEMIC PUBLISHERS, BO, vol. 12, no. 1, 29 September 2009 (2009-09-29), pages 71 - 79, XP019767002, ISSN: 1572-8781
- See references of WO 2014103842A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 2939976 A1 20151104; **EP 2939976 A4 20161012**; **EP 2939976 B1 20171018**; CN 104955768 A 20150930; CN 104955768 B 20161109; JP 6138159 B2 20170531; JP WO2014103842 A1 20170112; US 2015329354 A1 20151119; US 9725307 B2 20170808; WO 2014103842 A1 20140703

DOCDB simple family (application)

EP 13867007 A 20131218; CN 201380068579 A 20131218; JP 2013083951 W 20131218; JP 2014554362 A 20131218; US 201314655239 A 20131218